

IN THE CLAIMS:

Please **AMEND** claims 1-4, and **ADD** claims 5-18, as follows:

1. (CURRENTLY AMENDED) An adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train, comprising:

controlling the write pulse waveform based on a grouping table to generate an adaptive write pulse waveform, the grouping table having storing width data of the first and/or last pulses of the write pulse waveform varying according to corresponding stored values of lengths of marks to be written to generate an adaptive write pulse waveform ; and

writing input data on the recording medium using the adaptive write pulse waveform, wherein the generated adaptive write pulse waveform is generated without regard for a trailing space of a present mark being written using the adaptive write pulse waveform.

2. (CURRENTLY AMENDED) The adaptive writing method of claim 1, wherein the grouping table stores the width data of the first and/or last pulses for the write pulse waveform by grouping includes grouping markers associated with a magnitude-length of a present mark and a magnitudeslength of a leading and/or trailing spaces of the present mark into corresponding pulse groups according to corresponding lengths of the present mark and leading space.

3. (CURRENTLY AMENDED) An adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train, comprising:

controlling the write pulse waveform based on a grouping table having width data grouped in pulse groups which group of the first and/or last pulses of the write pulse waveform based on by corresponding a magnitude-lengths of a present mark of input data and a magnitudes of leading and/or trailing spaces of the present mark to generate an adaptive write pulse waveform; and

writing the input data on the optical recording medium using the adaptive write pulse waveform, wherein the adaptive write pulse waveform is different between respective zones of the recording medium and the input data is written in a land track or a groove track on the recording medium.

4. (CURRENTLY AMENDED) An adaptive writing method of writing input data on a recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train, comprising:

controlling the write pulse waveform based on a grouping table to generate an adaptive write pulse waveform, the grouping table having storing width data of the first and/or last pulses of the write pulse waveform grouped in corresponding pulse groups according to lengths of marks to be written and/or lengths of spaces adjacent to the marks to be written to generate an adaptive write pulse waveform; and

writing input data on the recording medium using the adaptive write pulse waveform, ~~wherein the adaptive write pulse waveform is based on whether the input data is written in a land track or a groove track.~~

5. (NEW) The adaptive writing method of claim 1, wherein the controlling the write pulse waveform comprises determining from the input data a length of a present mark to be written, and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a length of a mark which corresponds to the determined length.

6. (NEW) The adaptive writing method of claim 1, wherein the controlling the write pulse waveform further comprises determining from the input data a length of a space adjacent to a present mark to be written, and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a length of a space which corresponds to the determined length.

7. (NEW) The adaptive writing method of claim 5, wherein the controlling the write pulse waveform further comprises determining from the input data another length of a space adjacent to the present mark to be written, and the selecting from the grouping table comprises selecting one of the width data of the first and/or last pulses of the write pulse waveform which is associated with both a length of a mark which corresponds to the determined length and a length of a space which corresponds to the another determined length.

8. (NEW) The adaptive writing method of claim 3, wherein the controlling the write pulse waveform comprises determining from the input data a length of a present mark to be written, and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a stored length value of a mark to be written which corresponds to the determined length.

9. (NEW) The adaptive writing method of claim 3, wherein the controlling the write pulse waveform comprises determining from the input data a length of a lead space of a present mark to be written, and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a stored length value of the leading space which corresponds to the determined length.

10. (NEW) The adaptive writing method of claim 8, wherein the controlling the write pulse waveform comprises determining from the input data another length of a leading space adjacent to the present mark, and the selecting from the grouping table comprises selecting one of the width data of the first and/or last pulses of the write pulse waveform which is associated with both a stored length value of a mark which corresponds to the determined length and a stored length value of the space which corresponds to the another determined length.

11. (NEW) The adaptive writing method of claim 4, wherein the controlling the write pulse waveform comprises determining from the input data a length of a present mark to be written, and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a length of a mark which corresponds to the determined length.

12. (NEW) The adaptive writing method of claim 4, wherein the controlling the write pulse waveform comprises determining from the input data a length of a space adjacent to a present mark to be written, and selecting from the grouping table one of the width data of the first and/or last pulses of the write pulse waveform which is associated with a length of a space which corresponds to the determined length.

13. (NEW) The adaptive writing method of claim 11, wherein the controlling the write pulse waveform comprises determining from the input data another length of a space adjacent to the present mark to be written, and the selecting from the grouping table comprises selecting one of the width data of the first and/or last pulses of the write pulse waveform which is associated with both a length of a mark which corresponds to the determined length and a length of the space which corresponds to the another determined length.

14. (NEW) The adaptive writing method of claim 3, wherein the generated adaptive write pulse waveform is generated according to the lengths of the present mark and the leading space regardless of a length of a trailing space of the present mark.

15. (NEW) The adaptive writing method of claim 3, wherein the pulse groups comprise a short pulse group and another pulse group, each member of the another pulse group having lengths greater than each member of the short pulse group.

16. (NEW) The adaptive writing method of claim 4, wherein:
the present mark comprises another adjacent space other than the adjacent space such that the present mark is between the adjacent space and the another adjacent space; and
the generated adaptive write pulse waveform is generated according to the lengths of the present mark and the adjacent space regardless of a length of the another adjacent space of the present mark.

17. (NEW) The adaptive writing method of claim 4, wherein the pulse groups comprise a short pulse group and another pulse group, each member of the another pulse group having lengths greater than each member of the short pulse group.

18. (NEW) The adaptive writing method of claim 2, wherein the grouping table pulse groups comprise a short pulse group and another pulse group.